Bulletin of the Academy of Sciences of the USSR Division of Chemical Science 1969 vol.18 N12, pages 2561-2566

Interaction of 2-benzylidenindandione-1,3- 2-benzylidene-3(2h)-thionaphthenone-1,1-dioxide, and benzalbindone with trimethyl phosphite and tri-(dimethylamino)phosphine

Arbuzov B., Sorokina T., Vinogradova V., Musina A.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

1. In the absence of moisture trimethyl phosphite is added to benzalbindone in CH2C12 solution at the benzylidene double bond, forming a (1:1) adduct with bipolar structure, which isomerizes to the methyl ether of the enol form of the dimethyl ester of bindonylbenzylphosphinic acid (III). The latter is also formed when the reaction is conducted in the absence of a solvent at room temperature. 2. In the interaction of trimethyl phosphite with benzalbindone in the presence of glacial acetic acid, the dimethyl ester of bindonylbenzylphosphinic acid is formed. 3. In the interaction of tri(dimethylamino)phosphine with benzalbindone, 2-benzylidenindandione-1,3, and 2-benzylidene-3(2H)-thionaphthenone-1,1-dioxide, crystalline (1:1) adducts were obtained, possessing the structure of bipolar ions with a P-C bond. 4. The structures of all the products obtained were confirmed by the IR spectra and the data on the chemical shifts of the phosphorus nucleus. © 1970 Consultants Bureau.

http://dx.doi.org/10.1007/BF00912542